Funding Opportunities at the National Science Foundation
Strategies for Success

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Overview

- Who/What is NSF?
- Writing a good proposal
- What happens after submission of your grant proposal?

NSF Mission

"To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense"
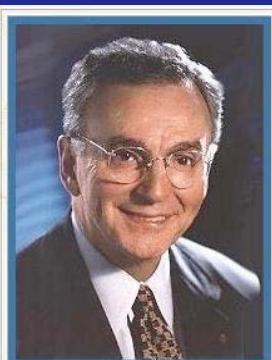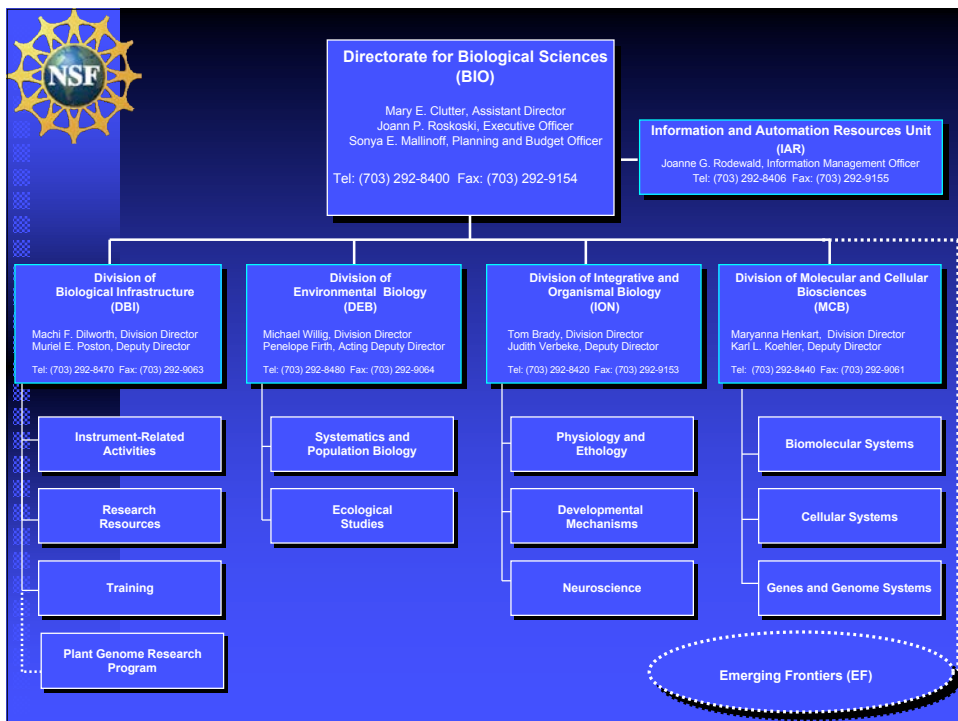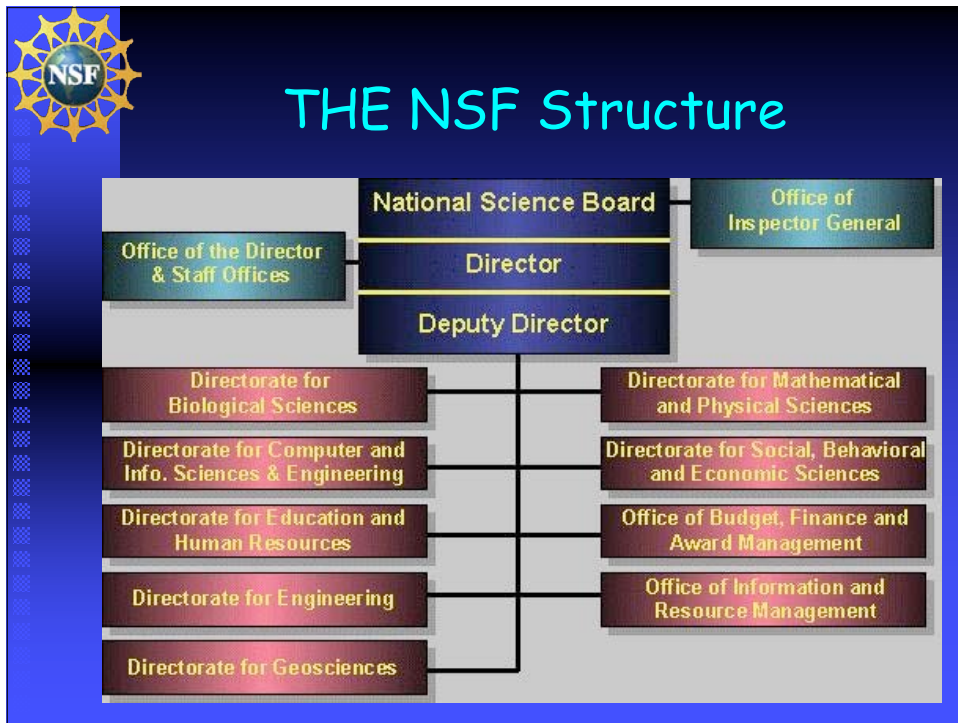
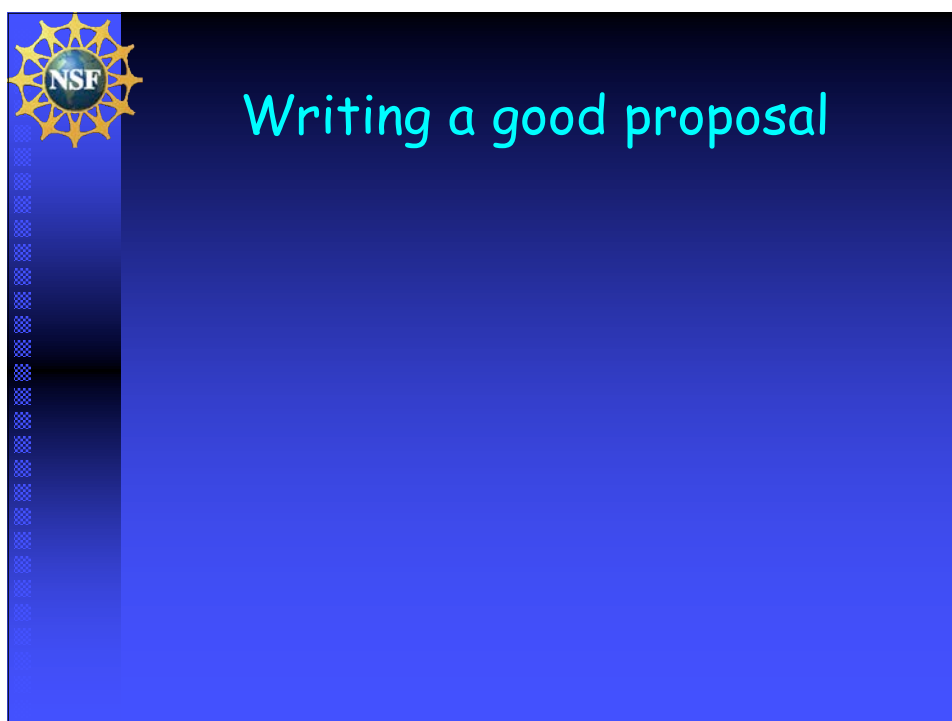--NSF Act of 1950

THE NSF Structure

Office of the Director

Dr. Arden L. Bement, Jr.
Acting Director

Dr. Joseph Bordogna
Deputy Director

THE NSF Structure

National Science Board

Office of Inspector General

Office of the Director & Staff Offices

Director

Deputy Director

Directorate for Biological Sciences

Directorate for Mathematical and Physical Sciences

Directorate for Computer and Info. Sciences & Engineering

Directorate for Social, Behavioral and Economic Sciences

Directorate for Education and Human Resources

Office of Budget, Finance and Award Management

Directorate for Engineering

Office of Information and Resource Management

Directorate for Geosciences

Directorate for Biological Sciences (BIO)

Mary E. Clutter, Assistant Director
Joann P. Roskoski, Executive Officer
Sonya E. Mallinoff, Planning and Budget Officer

Tel: (703) 292-8400 Fax: (703) 292-9154

Information and Automation Resources Unit (IAR)
Joanne G. Rodewald, Information Management Officer
Tel: (703) 292-8406 Fax: (703) 292-9155

Division of Biological Infrastructure (DBI)

Machi F. Dilworth, Division Director
Muriel E. Poston, Deputy Director

Tel: (703) 292-8470 Fax: (703) 292-9063

Division of Environmental Biology (DEB)

Michael Willig, Division Director
Penelope Firth, Acting Deputy Director

Tel: (703) 292-8480 Fax: (703) 292-9064

Division of Integrative and Organismal Biology (ION)

Tom Brady, Division Director
Judith Verbeke, Deputy Director

Tel: (703) 292-8420 Fax: (703) 292-9153

Division of Molecular and Cellular Biosciences (MCB)

Maryanna Henkart, Division Director
Karl L. Koehler, Deputy Director

Tel: (703) 292-8440 Fax: (703) 292-9061

Instrument-Related Activities

Systematics and Population Biology

Physiology and Ethology

Biomolecular Systems

Research Resources

Ecological Studies

Developmental Mechanisms

Cellular Systems

Training

Neuroscience

Genes and Genome Systems

Plant Genome Research Program

Emerging Frontiers (EF)

National Science Foundation - Directorate for Biological Sciences
Division of Biological Infrastructure (DBI)

Telephone: 703/292-8470
Fax: 703/292-9063
Plant Genome Fax: 703/292-9062

Division Director
Machi F. Dilworth   email: mdilwort@nsf.gov
Deputy Division Director
Muriel E. Poston   email: mposton@nsf.gov

Plant Genome Research Program

Program Directors
Jane Silverthorne
Fedora Sutton
Manfred Zorn
Chris Greer

email: dbipgr@nsf.gov

Human Resources Cluster

Postdoctoral Fellowships
Program Manager
Carter Kimsey
email: ckimsey@nsf.gov

ADVANCE

Cross-disciplinary Research at Undergraduate Institutions (C-RUI)

Graduate Teaching Fellows in GK-12 (GK-12)

Integrative Graduate Education and Research Training Program (IGERT)

Research Experiences for Undergraduates (REU)

Undergraduate Mentoring in Environmental Biology (UMEB)
Program Director
Sally O'Connor
email: soconnor@nsf.gov

Research Resources Cluster

Program Directors
Christopher L. Greer
email: cgreer@nsf.gov
Elizabeth R. Blood
email: eblood@nsf.gov

Biological Databases And Informatics
Program Director
Manfred Zorn
email: mzorn@nsf.gov

Biological Research Collections
Program Director
Mark A. Farmer
email: mfarmer@nsf.gov

Living Stock Collections
Program Director
Gerald B. Selzer
email: gselzer@nsf.gov

Biological Field Stations and Marine Laboratories
Program Directors
Gerald B. Selzer
email: gselzer@nsf.gov
Mark A. Farmer
email: mfarmer@nsf.gov

Multi-User Equipment and Instrumentation Resources Instrument Development for Biological Research
Program Directors
Gerald B. Selzer
email: gselzer@nsf.gov

Angela V. Klaus
email: aklaus@nsf.gov

Major Research Instrumentation (MRI)
Program Directors
Mark A. Farmer
email: mfarmer@nsf.gov

Helen Hansma
email: hhansma@nsf.gov

11/18/04

Writing a good proposal

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Getting Funded – Getting Started
www.nsf.gov

Guide to Programs (GTP)

Grant Proposal Guide (GPG)

Types of Proposal Submission

- No deadlines (e.g. workshops, SGERs)

- Submission Windows

- Deadlines
- Target dates

- Preliminary proposals

•Solicited proposals have a published Program Solicitation (Program Announcement)

•Unsolicited proposals are associated with regular research programs (check websites and GTP)
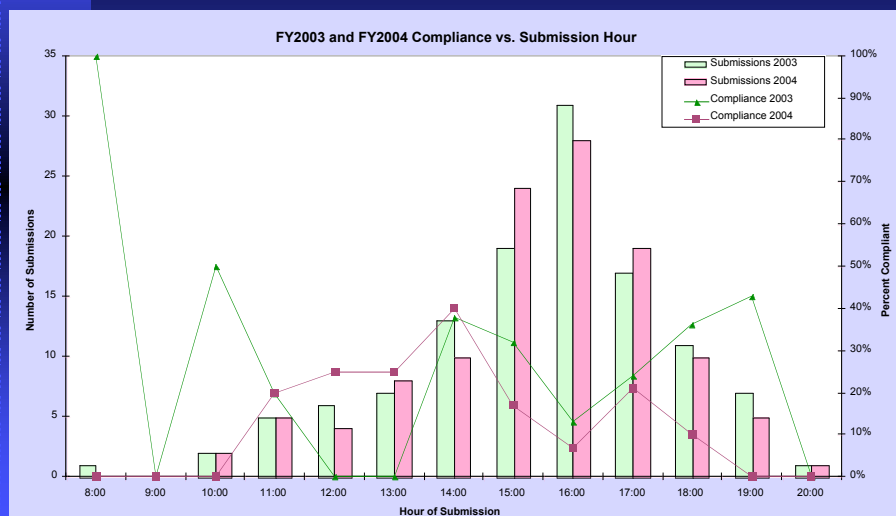
Read the Program Solicitation

- It outlines the scientific scope of the competition
- It summarizes what is required in the proposal for it to be compliant
- It tells you who to contact if you have questions
- It tells you when the deadline is

Why you shouldn't submit at the last minute:

FY2003 and FY2004 Compliance vs. Submission Hour

What to Look for in a Program Announcement

Read the Program Announcement Carefully

Pay special attention to:

- Goal of program
- Eligibility
- Special requirements

Then…

Call Your Program Director

Gerald Selzer

Muriel Poston

Carter Kimsey

Parag Chitnis

Good Reasons to Submit a Compliant Proposal

The three fatal flaws that will result in return of your proposal without review:

- No broader impacts in the project summary
- Project description in excess of 15 pages
- Non-compliant font or format

In Summary…

- Read the Program Solicitation before you start writing a proposal
- Don't leave proposal submission until the last minute because disasters can and do happen
- Follow the Program Solicitation directions carefully because…

  if you can't read this, neither can we and your proposal will be returned without review

NSF Program Directors
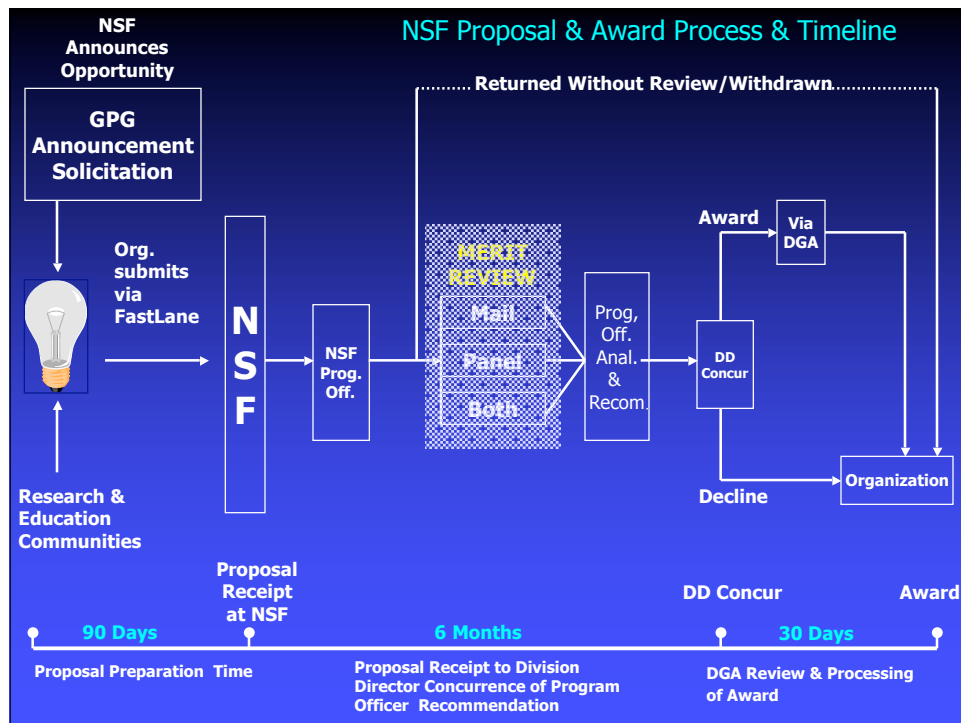
Permanent Program Directors

and

Rotators

A Good Proposal

■ A good proposal is a good idea, well expressed, with a clear indication of methods for pursuing the idea, evaluating the findings, and making them known to all who need to know.

A *Competitive* Proposal is…

• All of the above
• Appropriate for the Program
• Responsive to the Program Announcement

NSF Proposal & Award Process & Timeline

- NSF Announces Opportunity
- GPG Announcement Solicitation
- Org. submits via FastLane
- Research & Education Communities
- Returned Without Review/Withdrawn
- N S F
- NSF Prog. Off.
- MERIT REVIEW: Mail, Panel, Both
- Prog, Off. Anal. & Recom.
- DD Concur
- Award
- Via DGA
- Decline
- Organization

Timeline:
- 90 Days — Proposal Preparation Time
- Proposal Receipt at NSF
- 6 Months — Proposal Receipt to Division Director Concurrence of Program Officer Recommendation
- DD Concur
- 30 Days — DGA Review & Processing of Award
- Award

NSF Review Criteria

1997 – Two review criteria established
1999 – Elements added: (1) Integration of research and education, and (2) Broadening participation of all citizens in science
2002 – Strict implementation of 2 criteria announced

- Criterion 1 - What is the *intellectual merit* of the proposed activity?

  This criterion addresses the overall quality of the proposed activity to advance science and engineering through research and education.
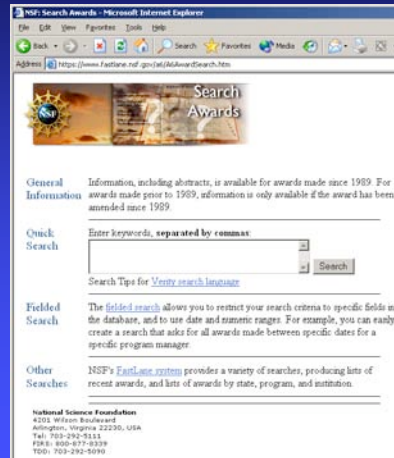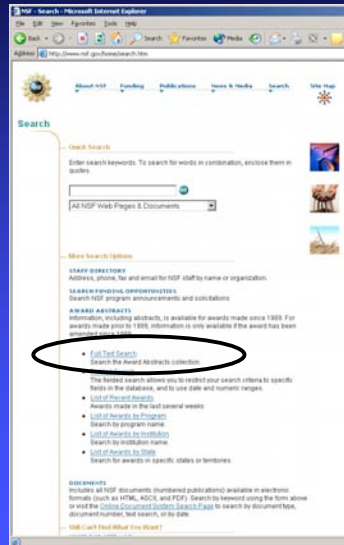
- Criterion 2 - What are the *broader impacts* of the proposed activity?

  This criterion addresses the overall impact of the proposed activity.

Obtain a copy of a successful proposal. Check Award Abstracts search page. Things change, get a recent award.

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Awards Abstracts Search Page

Proposal Review

- Proposals may be reviewed in panel, using mail review (ad hocs), or a combination of both

- The review process usually takes about six months to a decision

NSF Panel Review
(most research divisions)

- The panel is an advisory committee composed
- of ~10-20 people depending on proposal pressure
- Each proposal must receive at least 3 reviews
- In panel, each reviewer describes his/her views of the proposal to the rest of the panel
- The panel as a whole then discusses the proposal
- The proposal is then placed in a funding recommendation category (e.g. Fund, Fund if Possible, Do not fund)

Proposal Funding
Recommendations

The Program Director makes funding recommendations to the Division Director based on:

- The advice of the panel

- Budgetary constraints

- Other programmatic considerations

NSF Panel and Adhoc Reviewers

- NSF Awardees
- Program Officer's knowledge of research area
- References listed in proposal
- Recent technical programs from professional societies
- Recent authors in S&E journals
- Medline, Science Citation Index
- Reviewer recommendations
- PI suggestions

Getting on a Panel

- Contact your program director
- E-mail your CV to your program director
- Include your contact information
- Indicate your areas of expertise
- Follow up with a phone call
- Be polite, pleasant, and persistent (don't give up)

NSF Crosscutting Programs

http://www.nsf.gov/home/crssprgm

- Research Experiences for Undergraduates (REU)
- CAREER Awards
- RUI/ROA
- GK-12
- Math and Science Partnerships
- IGERT
- Many others

Funding Strategies
Visit NSF

- Types of people that visit NSF
    - Researchers/Science Educators
    - Office of sponsored research personnel
    - Deans/Administrators

- If you anticipate being in the DC area, call your Program Director(s) and make an appointment(s)

- Investigate setting up a special group visit

Getting Support

- NSF Publications
  - Program Announcements
  - Grant Proposal Guide
  - Web Pages
  - Funded Project Abstracts
  - Reports, Special Publications

- Successful Colleagues - on campus or at similar institution
- Mentors on Campus
- Previous Panelists
- Serve As Reviewer
- Sponsored Research Office
- Successful Proposals
- Program Officers
  - Incumbent
  - Former Rotators

A Declination
How to Gain from the Experience
Success rate for most programs is ~30%

Read the written Reviews and the Panel Summary
- What guidance was provided for improvements?
- Did reviewers misunderstand your intentions?
- Were reviewers from outside your field confused?
- Was proposal submitted to the wrong NSF program?
- Remember reviews were tempered by panel discussion
- Your Program Director or faculty mentors
can help you interpret the reviews

Call the Program Director for guidance and interpretation

Being a Good Citizen

Participate in the Peer Review System

- It works for you... but...

- It requires your work

- For the system to break even, you need to submit at least the same number of reviews you receive (or the equivalent) each year

**If you are asked to be an
ad hoc reviewer, panelist, or site visitor…**

- Please participate if at all possible
- If you cannot participate, please let us know as soon as possible
- Recommendations for additional reviewers and panelists are always appreciated
- Consider both intellectual merit and broader impacts in your reviews
- Make constructive comments to assist the PI in strengthening the proposed research

Community Mentoring

- Provide advice to new researchers as they develop proposals for the Program
- Consider ways in which you can involve new investigators, as well as researchers from PUIs, HBCUs, and Tribal Colleges in your project
  - Supplements
  - New projects

The Golden Rules

- Read your award letter before you start work
- Communicate regularly and effectively with your project members
- Use your Advisory Committee wisely
- Note deadlines for reports and supplement requests, or responses, and meet them
- Know when and when not to contact Program staff

Your Award Letter...

- Is an electronic message sent to the institutional representative
- Lists the project title and co-PIs
- Lists the award instrument
- Lists the total award amount, and start and end dates
- Lists cognizant Program and Grants officials
- If you have a cooperative agreement, it also includes deliverables and additional reporting requirements

Award Instruments

- **Standard award** – all funding is given at the start of the project but Annual Progress Reports are still required
- **Continuing award** – funds are released annually, contingent upon satisfactory progress documented in the Annual Progress Report
- **Cooperative agreement** – funds are issued contingent upon timely completion of deliverables, as documented in the Annual Progress Report and any additional required reports or reviews

Requesting Supplemental Funding

- Contact the PI first, if that is not you
- Call us and describe what you need
- We may ask you to send an outline by email along with a proposed budget
- After securing our go-ahead, submit the proposal via FastLane
- Requests over $100k will normally be sent out for review and may take longer to process
- Apply early!

Summary

- Start early – give yourself enough time
- Read the PA and follow rules in GPG
- Get feedback on your proposal from your colleagues
- Proposals should be cogent, appropriate, and justified
- Study reviews carefully (award or declination)
- Anticipate criticisms (better – *invite criticism*)
- Anticipate some frustration (and remember 3Ps)
- If declined - Call your Program Director after reading your reviews (take some time to think about them)
- If awarded - follow up on reporting and find out about supplemental funding (stay in touch with PD)